MULTICAST SERVICE DELIVERY IN A HIERARCHICAL NETWORK

ABSTRACT OF THE DISCLOSURE

5

A multicast method generates a packet-tracking queue
with individual entries representing datapackets for transfer
through a hierarchical network. The actual datapacket and
its real payload are stored as one item in a FIFO buffer.

10   Any packet-tracking queue entry representing a multicast
datapacket is expanded into several consecutive entries, one
each for the individual subscribers enrolled to receive a
broadcast. A first of such expanded entries is flagged as
being first, and a last such expanded entry is flagged as

15   being last. Each expanded entry may be subject to its own
unique service-level policy, with the result that the
datapackets can be released and cleared in any order. If the
first or last are released, then the next are marked as first
or last. When only one expanded entry is left, it will be

20   flagged as being both first and last. When it is released,
the entry in the packet-tracking queue is cleared as well as
the actual datapacket and its real payload in the FIFO
buffer. Such individually delayed releases of the multicast
datapackets help enforce the bandwidth limiting function of

25   the service-level policies involved.